The Rural Poor's Access to Supermarkets and Large Grocery Stores

A recent study by the U.S. Department of Agriculture's (USDA) Economic Research Service (ERS) found that retail food prices varied with the type of store and its location. Compared with metro areas, rural areas support fewer supermarkets and a larger percentage of smaller grocery stores. Also, rural households face supermarket prices about 4 percent higher than those available to suburban households.

Nationwide, supermarket prices average 10 percent lower than prices in other grocery stores, such as ''mom and pop'' stores or convenience stores. Supermarkets can take advantage of economies of scale (as sales increase, costs per unit decline) by having smaller markups—and, thus, lower prices. The larger physical size of supermarkets also allows for greater product variety and more economical brands (store-label and generic) and package sizes.

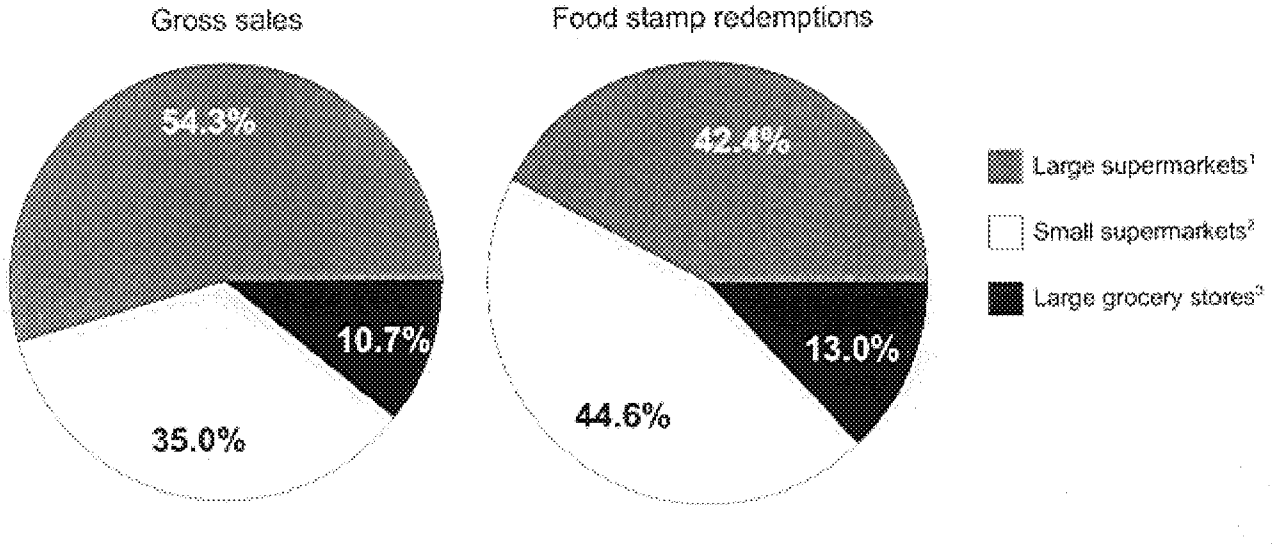
Although poor households spent 76.7 percent of food stamps in supermarkets nationwide, rural supermarkets accounted for just 58.9 percent of all rural food stamp redemptions. In low-income rural areas, supermarkets accounted for only 52.8 percent of total redemptions.

Because of price differences between supermarkets in rural and suburban areas, and the lower use of supermarkets in poor rural areas, poor rural households face food prices that are 2.5 percent higher, on average, than other rural households face and that are 3.1 percent higher than those suburban households face.

ERS investigated access to food stores in 36 rural, high-poverty counties bordering the Mississippi River. Prior studies have focused on households in urban metro areas because they account for three-quarters of the total U.S. population. The selection of this particular area—the Lower Mississippi Delta region—supports the work of the Nutrition Intervention Research

Large food retailer sales and food stamp redemptions, by store sales class, Lower Delta core counties

Low-income households spend more in smaller supermarkets and grocery stores than in larger supermarkets.



[1]Annual sales $6 million or more.
[2]Annual sales $2 million up to $6 milion.
[3]Annual sales $500,000 up to $2 million.

Source: Food and Nutrition Service, U.S. Department of Agriculture.

Table 1. Net accessibility of all households to larger food retailers: Lower Delta core counties[1]

The net accessibility ratio exceeded 1.0 in 38 percent of ZIP Codes, representing 72.4 percent of the total population in the Lower Delta region.

Net accessibility ratio (R)	ZIP Codes	ZIP Code households	ZIP Code population	ZIP Code households without car
		Number		
Less than 0.5	0	0	0	0
0.5 - 0.749	22	9,567	28,319	1,570
0.75 - 1.0	102	65,832	198,526	11,950
More than 1.0	76	197,389	584,508	37,892
36-county total	200	272,788	811,353	51,412
		Percent share[2]		
Less than 0.5	0	0	0	0
0.5 - 0.749	11.0	3.5	3.5	16.4
0.75 - 1.0	51.0	24.1	24.5	18.1
More than 1.0	38.0	72.4	72.0	19.2

[1]Net accessibility ratio = (accessible food sales)/(accessible food expenditures).
[2]Percentages may not sum to 100 due to rounding.
Source: Economic Research Service, USDA.

Initiative (NIRI), a consortium of seven partners, including USDA and six higher education and research institutions located in the region. The aim of NIRI is to improve the health and well-being of people in the Lower Delta region, and one of its objectives is to improve access to affordable, quality food by low-income households.

The 36-county area where the study was conducted contained 222 large food retail outlets with gross sales in 1993 of $909 million; food stamp redemption in these stores totaled $113 million. Supermarkets with annual sales of $6 million or more accounted for 54.3 percent of gross sales but only 42.4 percent of food stamp redemptions (figure).

The availability of large food retailers can be gauged by the average number of square miles per store for a given area. For example, in the 36 counties, there was one supermarket per 190.5 square miles; for all rural counties in Arkansas, Louisiana, and Mississippi, there was one supermarket per 153.5 square miles. When large grocery stores are included, the average square miles per large retailer in all rural counties improved to 101.6.

Household access to larger grocery stores was determined, and the level of accessible annual food dollars in the area where the study was conducted was separated into ZIP Code quartiles. ZIP Codes in the quartile with the highest food sales accounted for 57.2 percent of the population in the area where the study was conducted. The level of household food expenditures available to a retail food location was also separated into ZIP Code quartiles. The highest quartile accounted for 51.4 percent of the population in the area included in the study. Net accessibility ratios were calculated by dividing accessible food sales by accessible food expenditures and then tabulated (table 1). Of the 200 ZIP Codes that made up the core study area, 124 had accessibility ratios less than 1.0—indicating that food expenditures were not fully satisfied by accessible large retailers.

A separate analysis of low-income households showed that they are less likely to travel a considerable distance to reach large retail outlets, because low-income householders may not own or

Table 2. Net accessibility of low-income households to large food retailers: Lower Delta core counties[1]
The net accessibility ratio exceeded 1.0 in only 22.5 percent of Lower Delta ZIP Codes, representing less than one-third of the total low-income population.

Net accessibility ratio (R)	ZIP Codes	ZIP Code low-income households[2]	ZIP Code low-income population[3]	ZIP Code households without car
		Number		
Less than 0.5	9	7,209	21,626	na
0.5 - 0.749	35	21,698	65,097	na
0.75 - 1.0	111	49,137	245,051	na
More than 1.0	45	81,683	147,412	na
36-county total	200	159,727	479,186	na
		Percent share[4]		
Less than 0.5	4.5	4.5	4.5	na
0.5 - 0.749	17.5	13.6	13.6	na
0.75 - 1.0	55.5	51.1	51.1	na
More than 1.0	22.5	30.8	30.8	na

[1]Net accessibility ratio = (accessible food stamp redemptions)/(accessible food stamp issuances).
[2]Estimated.
[3]Based on 130 percent of poverty household income threshold.
[4]Percentages may not sum to 100 due to rounding.
na = Not available.
Source: Economic Research Service, USDA.

have access to transportation, or they may not be able to afford it. As a proxy for food purchases by low-income households and sales by large retailers, aggregate ZIP Code-level data (obtained from the Food and Nutrition Service of the U.S. Department of Agriculture) were used. These data include food stamp redemptions by large retailers and food stamp issuances made to households from each ZIP Code in the Lower Delta region.

The ratio of accessible food stamp redemptions to accessible food stamp issuances was calculated for each ZIP Code in the same way as was the net-accessibility ratio for all households. Of the 200 ZIP Codes in the 36-county core area, only 45 (22.5 percent) had ratios exceeding 1.0 (table 2). Compared with all households, low-income households appear to be located disproportionately in areas of net-accessibility shortfalls. Within the 36 counties, a relatively large share of the total area had insufficient net accessibility. Given their low-income status, households in these areas were less likely to travel to large retailers beyond the 30-mile retail range. Instead, they needed to rely more on small grocery stores and convenience stores that offer fewer selections and generally higher prices.

Source: Kaufman, P.R., 1999, Rural poor have less access to supermarkets, large grocery stores, *Rural Development Perspectives* 13(*3*):19-25.